



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,333	09/12/2003	Darwin Mitchel Hanks	200313595-1	8049

7590 12/28/2005

HEWLETT-PACKARD DEVELOPMENT COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

FRECH, KARL D

ART UNIT	PAPER NUMBER
----------	--------------

2876

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/661,333	Applicant(s) HANKS, DARWIN MITCHEL	
	Examiner Karl D. Frech	Art Unit 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 20-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's response filed 10/13/05 has been considered. Claims 1-19 remain pending; claims 20-27 have been withdrawn.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bradshaw et al WO 99/54141 in view of Bruner et al WO 95/34066. Bradshaw discloses on page 19 line 25 – page 20 line 13 setting up a reference coordinate system on a disk. Bradshaw does not specifically disclose the gain calibration. Bruner discloses on page 4 computing various disk calibration parameters including current equations used to generate null currents that maintain the transducer of the drive, i.e. gain. It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Bradshaw and Bruner. This would result in a system in which a reliable boot of a disk was provided. Bradshaw and Bruner do not specifically disclose the duty cycle calibration or the digital to analog conversion as claimed. However, Official Notice is taken that both duty cycle calibration and digital to analog conversion are old and well known. It would have been obvious to one of ordinary skill in the art at the time of the invention to calibrate the duty cycle of the reader in order to sync the reader with the specific disc being read. It would have been obvious to a person of ordinary skill in the art at the time of the invention at the time of the invention to perform a digital to analog conversion in order to allow analog circuitry

Art Unit: 2876

of the reader to analyze the information held on a digital optical disc. Bradshaw and Bruner do not disclose the linear reference pattern or the sawtooth reference pattern. However, both of these are also old and well known. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use either a known linear or sawtooth reference pattern as a matter of design choice as there is no criticality to either reference pattern currently disclosed. Although not specifically inherent, it is also well known to perform a line-fitting algorithm on coordinate data. It would have been obvious to one of ordinary skill in the art at the time of the invention to perform a line-fitting algorithm on the raw coordinate data of Bradshaw/Bruner in order to attempt to determine and remove erroneous data points.

4. Applicant's arguments filed 10/13/05 have been fully considered but they are not persuasive.

5. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. On pages 7 and 8 of the response of 10/13/2005, applicant reiterates claim language alleging that the prior art does not show the claimed features. However, applicant does not clearly point out how these reiterated claimed limitations are not found within the prior art reference.

6. Applicant does argue that the prior art relied upon does not disclose the "reference pattern ... to create a table of coordinate data". The examiner respectfully

disagrees. Applicant admits that the prior art relied upon discloses a polar coordinate system. The examiner maintains that the polar coordinate system of the prior art meets the claimed element.

7. In support of the examiner's holding of Official Notice; analog to digital conversion is taught by Nishida 5,744,985; duty cycle calibration is taught by Cohen 5,021,937; a sawtooth reference pattern is taught by Mizohita 4,720,754; a linear reference pattern is taught by Suzuki 4,744,039; and a line fitting algorithm is taught by Wang 5,790,250.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D. Frech whose telephone number is (571) 272-2390. The examiner can normally be reached on maxi-flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Frech
Primary Examiner
Art Unit 2876
